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Mertz, Prema

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Prema Mertz, Ph.D. Primary Examiner Art Unit 1646 4D81 Remsen Bldg Mailbox 4C70 US Patent & Trademark Office Tel # (571) 272-0876 FAX # (571) 273-0876

STAFF USE ONLY
Searcher:
Searcher Phone: 2-
Date Searcher Picked up:
Date Completed:
Searcher Prep/Rev. Time:
Online Time:

NA#:_ AA#: Interference: SPD S/L: Oligomer: __ SPDI: S/L:__ Encode/Transl: Structure#:___

Inventor:____ Litigation:____

Type of Search

DIALOG: QUESTEL/ORBIT: LEXIS/NEXIS: SEQUENCE SYSTEM:_ WWW/Internet:_ Other(Specify):_

Vendors and cost where applicable

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Result
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Copyright (c) 1993 - 2005 Compugen Ltd.
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IL6_CAPHI	Q9TTH4	Q7MDW7	IL6_LAMGL	IL6_PHOVI	Q6V919	Q9N2H9	Q8LQR8	Q865W7	Q811T9	Q8CF88	Q7TQ21	Q8CF87	Q3400B
Q28319	Q9tth4	Q7mdw7	Q865x6		Q6v919	Q9n2h9	-	Q865w7	Q811t9	Q8cf88	Q7tq21	Q8cf87	Q34008
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ALIGNMENTS

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Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases. EMBL; BC033245; AAH33245.1; - HSSP, P09919; IGNC. GO; GO:0005576; C:extracellular; IEA. GO; GO:0005125; F:cytokine activity; IEA. GO; GO:0005138; F:interleukin-6 receptor binding; IEA. GO; GO:0005138; F:immune response; IEA. InterPro; IPR009079; 4 helix cytokine. InterPro; IPR009579; IA helix cytokine. InterPro; IPR009579; IGNGF GCSF MGF. InterPro; IPR003573; IL6 MGF GCSF. InterPro; IPR003574; Interleukin_6. Pfam; PF00489; IL6; 1. PRINTS; PR00433; IL6GCSFMGF.	Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., Krzywinski M.I., Skalska U., Smallus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002). [2] [2] [2] SEQUENCE FROM N.A. TISSUE=Skin; Strausberg R.;	MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Schemnen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M.J., Usdin T.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Brownstein M.J., Woldin T.B., Toshiyuki S., Carninci P., Prange C., Brownstein M.J., Woldin T.B., Toshiyuki S.J., Garnaratne P.H., Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Villalon M., Madan A., Rodrigues S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,	QBN4W3 QBN4W3 QBN4W3 QBN4W3 QBN4W3; QBN4W3 QBNAW3 QBNAW3 QBNAW3 QBNAW3 QBNAW3 QBNA	M.7. 1

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ProDom; PD008388; GCSF MGF; 1.
ProDom; PD004356; Interleukin_6;
SMART; SM00126; IL6; 1.
PROSITE; PS00254; INTERLEUKIN_6;
SEQUENCE \ 200 AA; 21543 MW; 86
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Oheda M., Nomura H., Yamazaki T.;
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MEDLINE=86151684;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=86220137; PubMed=2423327;
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Mammalia; Eutheria;
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FHCRC, Seattle,
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Kubota N., Oheda
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(Rel. 45, Last annotation updat
(colony-stimulating factor precu
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llarity 100.0%;
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rROM N.A.

1; PubMed=2420009;

e T.C., Gabrile
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in P.E., Myambo
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heda M.,
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                                                                                    582 program for genomic applications, http://pga.gs.washington.edu)."; http://pga.gs.washington.edu).";
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Pred. No. 5.2e-74;
); Mismatches 0;
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., Nomura H., Ono M.;
sion of cDNA for huma
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Lee K.L.,
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EMBL; EMBL; EMBL;

X03438; M13008; X03656; X03655;

CAA27168.1; AAA03056.1; CAA27291.1; CAA27290.1;

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non-profit institutions as long and this statement is not removed. and this statement agreement (See equires a license agreement (email to license@isb-sib.ch)

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as its content

Usage

http://www.isb-sib.ch/announce/

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-!- SUBUNIT: MOTOR TO CO. 1- SUBCELLULAR LOCATION: -!- ALTERNATIVE PRODUCTS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clogston C.L., Hu S., Boone T.C., Lu H.S.;
"Glycosidase digestion, electrophoresis and chromatographic
of recombinant human granulocyte colony-stimulating factor g
produced in Chinese hamster ovary cells.";
J. Chromatogr. A 637:55-62(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=93281718; PubMed=7685117;
Hill C.P., Osslund T.D., Elsenberg D.;
"The structure of granulocyte-colony-stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Murdock D.C., Chazin V.R., Bruszewski J., Lu H., C
Barendt J., Platzer E., Moore M.A.S., Mertelsmann
"Recombinant human granulocyte colony-stimulating
normal and leukemic myeloid cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        relationship to other growth factors.";
Proc. Natl. Acad. Sci. U.S.A. 90:5167-5171(1993).
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Zink T., Ross A., Luers K., Cleslar C.,
"Btructure and dynamics of the human gra
factor determined by NMR spectroscopy. J
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MEDLINE=93293942; PubMed=7685769;
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                                                                                                                                                                                                                                                   Name=Short;
IsoId=P09919-2; Sequence=VSP 002673;
IsoId=P09919-2; Sequence=VSP 002673;
PTM: O-glycan consists of Gal-GalNAc disaccharide which can be modified with up to two sialic acid residues (done in recombinantly expressed G-CSF from CHO cells).
PHARMACEUTICAL: Available under the names Neupogen or Granulokine (Amgen/Roche) and Granocyte (Rhone-Poulenc). Used to treat neutropenia (a disorder characterized by an extremely low number of neutrophils in blood).

SIMILARITY: Belongs to the II-6 superfamily.
                                                                                                                                                                                                          CAUTION: Ref. 4 misquotes the gene name as "CSF1". DATABASE: NAME=Neupogen/Granulokine; NOTE=Clinical information on Neupogen/Granulokine; WWW="http://www.neupogen.com/".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: Granulocyte/macrophage colony-stimulating cytokines that act in hematopoiesis by controlling t differentiation, and function of 2 related white cel of the blood, the granulocytes and the monocytes-mac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Event=Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                           IsoId=P09919-1; Sequence=Displayed;
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granulocyte colony-stimulating
y. Loop mobility in a four-heli;
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SIGNAL
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PRINTS; PR00433; IL6GCSFMGF.
ProDom; PD008388; GCSF MGF; 1.
SMART; SM00126; IL6; 1.
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3D-structure; Alternative splicing; Cytokine; Glycoprotein;
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PDB; 1RHG; X-ray; A/B/C=31-207.
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                                               FELCA
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A25093; FQHUGL.
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M17706; AAA35882.1; -
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                                                                                                     WQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQP 174
                                                                                                                                            WAPLSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTI
                                                                                          WQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQP
                                                                                                                             WAPLSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGI
                                                                                                                                                                TPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLVSECATYKLCHPEELVLLGHSLGIP
                                                                                                                                                                                  TPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08284; P:positive regulation of cell proliferation; TAS IPR009079; 4 helix cytokine.
IPR003629; GCSF MGF.
          (Rel. 39,
(Rel. 39,
(Rel. 44,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NMR; @=30-207
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(Rel. 39, Last sequence update) (Rel. 44, Last annotation updat colony-stimulating factor precu
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                                             STANDARD;
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A -> T (in_dbSNP:2227330)
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 precursor
          update)
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STRAIN=Buropean shorthair; TISSUE=Lung;
MEDLINE=21389237; PubMed=11497496; DOI=10.1006/cyto.2001.0910;
                                                                                                                                                                                                                                                                                                                                                         SIGNAL
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Cytokine; Glycoprotein; Growth factor;
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PRINTS; PR00434; INTERLEUKIN6.
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Mammalia; Eutheria; Carnivora;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        feline granulocyte colony-stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Isolation, nucleotide sequence and expression of feline granulocyte colony-stimulating factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBUNIT: Monomer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PTM: O-glycosylated (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CSF induces granulocytes
                                                                   141
                                                                                             121
                                                                                                                        81
                                                                                                                                                 61
                                                                                                                                                                            21
                                                                                                                                                                                                                                                                                                                                                                                                               SM00126; IL6; 1
                                                                                                                                                                                                                                             Similarity
                                                                 MEDVGMAPAVPPTQGTMPTFTSAFQRRAGGTLVASNLQSFLEVAYRALRHFTKP
                                                                                          MEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQP
                                                                                                                     LSSCSSQALQLTGCLRQLHSGLFLYQGLLQALAGISPELAPTLDMLQLDITDFAINIWQQ
                                                                                                                                             LSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQ
                                                                                                                                                                        TPLGPTSSLPQSFLLKCLEQVRKVQADGTALQERLCAAHKLCHPEELVLLGHALGIPQAP
                                                                                                                                                                                                    TPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR009079; 4 helix cytokine.
IPR003629; GCSF MGF.
IPR003573; IL6 MGF GCSF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPR003574; Interleukin_6.
                                                                                                                                                                                                                                                                                                                                                                                 Glycoprotein;
                                                                                                                                                                                                                                                                                 153
194
                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Onions D.E.;
                                                                                                                                                                                                                                                                                      AA.
                                                                                                                                                                                                                                                                                      153
21154
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194
62
94
                                                                                                                                                                                                                                             83.0%;
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                                                                                                                                                                                                                                                                                     MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Secreted.
                                                                                                                                                                                                                                            Score 744;
Pred. No. 4.
                                                                                                                                                                                                                                                                                                   O-linked (GalNAc.
                                                                                                                                                                                                                                                                                                             Granulocyte colony-stimulating factor.
By similarity.
By similarity.
                                                                                                                                                                                                                                                                                                                                                        Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (By similarity).
                                                                                                                                                                                                                                                                                     F72B7AB3DAE7385E
                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                  Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               There are no rest
                                                                                                                                                                                                                                             . 2e-60;
                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                         Length 194;
                                                                                                                                                                                                                                                                                     CRC64;
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PRELIMINARY;

PRT;

195

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RRN OOCOGED DI AC
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CSF3_SH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 141
                                                                                                                                                                                                                                                             CSF3_SHEEP
Q28746;
30-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Signal.
SIGNAL
                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
Caprinae; Ovis.
                                                                                                                                                                                                                 30-MAY-2000
05-JUL-2004
                                                                                                                                                                                                                                                                                                                                SHEEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6_MGF_GCSF.
InterPro; IPR003574; Interleukin_6.
Pfam; PF00489; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Molecular cloning and expression of the granulocyte colony-stimulating factor."; Gene 274:263-269(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Name=G-CSF;
Pelis silvestris catus (Cat).
Pelis silvestris catus (Cat).
Pelis silvestris catus (Catellata; Pelidae;
Pelis silvestris Catellata; Pissipedia; Pelidae;
SEQUENCE FROM N.A.
MEDLINE=95102116;
                                                       NCBI_TaxID=9940;
                                                                                                                                                     Ovis aries (Sheep)
                                                                                                                                                                               Name=CSF3;
                                                                                                                                                                                             Granulocyte colony-stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProDom; PD008388; GCSF_MGF; 1.
SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PR00434; INTERLEUXING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HSSP; P35834;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AB042552; BAB17789.1; -. EMBL; AB042553; BAB17757.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yamamoto A., Iwata A.,
Tsujimoto H., Hasegawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Granulocyte colony-stimulating factor precursor
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05-JUL-2004
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MEDLINE=21531548; PubMed=11675019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO:0005576; C:extracellular; IEA.
GO:0005125; F:cytckine activity. IEA.
GO:0005138; F:interleukin-6 receptor
GO:0006955; P:immune response; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141;
                                                                                                                                                                                                                                                                                                                                                                                                                        142
                                                                                                                                                                                                                                                                                                                                                                                                                                             121 MEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQP
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(Rel.
(Rel.
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                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                    39,
44,
PubMed=7528579
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21255 MW;
                                                                                                          Chordata; Craniata; Vertebrata;
Cetartiodactyla; Ruminantia; Pe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83.0%;
                                                                                                                                                                                             Last sequence up
Last annotation
imulating factor
                                                                                                                                                                                                                                                                Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16, Created)16, Last sequence update)27, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 744; DB 2;
Pred. No. 4.2e-60;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             544C682909412FCF CRC64;
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ion update)
:or (G-CSF)
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                                                                                                                                                                                                                                                                                                           174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         binding; IEA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
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RESULT 6
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AC P3583 C
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Matches 143; Conserv
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"Cloning and se
factor cDNA.";
                                                                                                                                                                                                                                                                                                                                                                                                    CSF3 CANFA
P35834;
01-JUN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
CARBOHYD
SEQUENCE
                                                                                                                                                              Canis familiaris (Dog).
Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; (
Mammalia; Eutheria; Carnivora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -i-
                                                                                                                                                                                                                                                                                                 01-JUN-1994 (Rel. 29, Last seq
25-OCT-2004 (Rel. 45, Last anno
Granulocyte colony-stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS; PR00433; IL6GCSFMGF.

Prodom; PD008888; GCSF MGF; 1.

SMART; SM00126; IL6; 1.

PROSITE; PS00254; INTERLEUKIN 6; 1.

Cytokine; Glycoprotein; Growth fact

DISULFID 36 42 By sin
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MEDLINE=94076341; F
Lovejoy B., Cascio
                                                                   X-RAY CRYSTALLOGRAPHY (2.2 ANGSTROMS)
                                                                                                                                                                                                                                                                            Name=CSF3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; L07939; AAA68006.1; -. PIR; T10268; T10268. HSSP; P09919; 1RHG.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               modified and this statement
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InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
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PRINTS; PR0043;
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FUNCTION: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoissis by controlling the product differentiation, and function of 2 related white cell population of the blood, the granulocytes and the monocytes-macrophages.

CSF induces granulocytes (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    s SWISS-PROT entry is copyright. It is produced through a collab ween the Swiss Institute of Bioinformatics and the EMBL outst European Bioinformatics Institute. There are no restrictions by non-profit institutions as long as its content is in the content is in the content in the content in the content is in the content in the content in the content is in the content in
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SUBCELLULAR LOCATION: Secreted.
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SIMILARITY: Belongs to the IL-6 superfamily.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TPLGPARSLPQSFLLKCLEQVRKIQADGAELQERLCATHKLCHPEELVLLGHSLGIPQAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LSSCSSQSLQLTSCLDQLHGGLFLYQGLLQALAGISPBLAPTLDTLQLDVTDFATNIWLQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133
174 AA;
                                                                                                                                                                                                                                                                                                                                    (Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seow H.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                    29,
45,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82.4%;
                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of an ovine granulaction
                                                                                                                                                                                                                                                                                                    sequence up annotation ating factor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       By similarity.
By similarity.
O-linked (GalNAc. . .) (B.
BASAABF8D23ACD1E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 738; DB 1;
Pred. No. 1.3e-59;
                                                                                                                                                                     Craniata; Vertebrata; ; Fissipedia; Canidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              175
                                                                                                                                                                                                                                                                                                        update)
(G-CSF)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .) (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                         Euteleostomi; Canis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              actors are
ne production,
populations
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PubMed=7504736; o D., Eisenberg

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RESULT 7
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Best Local S
Matches 140
          CSF3_BOVIN STANDARD; PRT; 195 AA.

p35833; Q9TV89;
01-JUN-1994 (Rel. 29, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Granulocyte colony-stimulating factor precursor (G-
Name=CSF3; Synonyms=GCSF;
Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalla; Eutheria; Cetartiodactyla; Ruminantia; Pe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              factor (G-CSF).";
J. Mol. Biol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TURN
HELIX
TURN
STRAND
                                                                                                                                                                          BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAND
HELIX
HELIX
Bovinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
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HELIX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TURN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PDB; 1BGD; X-ray; @=1-175.
PDB; 1BGE; X-ray; A/B=1-175.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HELIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00254; INTERLEUKIN_6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PRO0433; IL6GCSFMGF.
ProDom; PD008388; GCSF_MGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JD-structure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUBCELLUI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: Belongs to the IL-6 superfamily
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PTM: O-glycosylated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CSF induces granulocytes.
                                                                                                                                                                                                                                        123
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                                                                                                                                                                                                                                                                                                                                                                                                                                    140;
                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                      62
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                                                                                                                                                                                                                                                                                                                                                                                                      N
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Biol. 234:640-653(1993).
Bos.
                                                                                                                                                                                                                                                            EELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQP 174
                                                                                                                                                                                                                                                                                                      SSCSSQALQLMGCLRQLHSGLFLYQGLLQALAGISPELAFTLDTLQLDTTDFAINIWQQM
                                                                                                                                                                                                                                                                                                                                 SSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQM
                                                                                                                                                                                                                                       EDLGMAPAVPPTQGTMPAFTSAFQRRAGGVLVASNLQSFLELAYRALRHFAKP
                                                                                                                                                                                                                                                                                                                                                                   PLGPTGPLPQSFLLXCLEQMRKVQADGTALQETLCATHQLCHPEELVLLGHALGIPQPPL
                                                                                                                                                                                                                                                                                                                                                                                                      PLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWAPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPR009079; 4 helix cytokine
IPR003629; GCSF MGF.
IPR003573; IL6 MGF GCSF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cytokine; Glycoprotein; Growth factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IL6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 39
555
556
569
92
100
126
171
                                                                                                                                                                                                                                                                                                                                                                                                                                                   81.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18858 MW; 28C26B24990C6DB3
                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 3.10
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 734; DB 1;
Pred. No. 3.1e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and bovine granulocyte-colony.stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O-linked (GalNAc. .
                              Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 175;
                                                                           (G-CSF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
               Pecora;

    .) (By similarity)

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             Bovidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                        175
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                      121
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61 22

LSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQ

TPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWAP

Indels

0;

Gaps

GIPQAP

120 81 60 0

Conservative

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Query Match
Best Local S
Matches 141
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SEQUENCE FROM N.A.
STRAIN=Holstein;
                                                                                                                                                                             CHAIN
DISULFID
DISULFID
CARBOHYD
CONFLICT
                                                TURN
TURN
TURN
HELIX
HELIX
HELIX
                                                                                                                   TURN
                                                                                                                                      TURN
HELIX
                                                                                                                                                                                                                                                          ProDom; PD008388; GCSF MGF; 1.
SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                              between the Swiss Institute of Bioinformat
the European Bioinformatics Institute. The
use by non-profit institutions as long
modified and this statement is not removed.
                                       SEQUENCE
                                                                                                                                                           XITEH
                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Cloning, sequencing, and analysis of cDNA encoding bov colony stimulating factor.";
Submitted (SEP-1998) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                   HELIX
                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                       3D-structure;
                                                                                                                                                                                                                                                                                                                              PDB; 1BGC;
                                                                                                                                                                                                                                                                                                                                        EMBL; AF092533; AAD16102.1; -.
                                                                                                                                                                                                                                                                                                                                                            or send
                                                                                                                                                                                                                                                                                                                                                                     entities requires a license agreement
                                                                                                                                                                                                                                                  PROSITE; PS00254;
                                                                                                                                                                                                                                                                               PRINTS; PR00433; IL6GCSFMGF.
                                                                                                                                                                                                                                                                                                 InterPro; IPR003573;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Crystal structure of canine and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=94076341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Heidari M.,
                                                                                                                                                                                                                                                                                                                     interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      K-RAY CRYSTALLOGRAPHY (1.7 ANGSTROMS)
MEDLINE=94076341; PubMed=7504736;
                                                                                                                                                                                                                                                                                         fam; PF00489;
                                                                                                                                                                                                                                                                                                           nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   PTM: O-glycosylated.
          Similarity
                                                                                                                                                                                                                                                                                                                                                           an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                        | X-La;
| IPR009079; 4 hellx (2-
| IPR003629; GCSF_MGE.
| Then03573; IL6_MGF_GCSF.
                                       195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kehrli M.E. Jr.;
                                                                                                                                                                                                                                        Cytokine;
                                      A
A
                                                                                                                                                                                                                             INTERLEUKIN 6; 1.
okine; Glycoprotein; Growth factor; Signal
21
Potential.
                                                                  75
85
85
112
115
145
                                       21431
         81.1%;
                                                                                                                                                                                                                                                                                                           helix_cytokine.
SsF_MGF.
                                      WW;
Score 727; DB
Pred. No. 1.5e
11; Mismatches
                                                                                                                                                                              O-linked
TS -> RG
                                                                                                                                                                                                                    Granulocyte colony-stimulating
                                      8C06119E4ADFBA73 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D.;
bovine granulocyte-colony stimulating
                                                                                                                                                                           (GalNAC. . . ; (in Ref. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA encoding bovine granulocyte
                                                                                                                                                                                                                                                                                                                                                                     (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                 There are no
         DB 1;
.5e-58;
                                                                                                                                                                                                                                                                                                                                                                                         35
                                                                                                                                                                                                                                                                                                                                                                               Usage
                                                                                                                                                                                                                                                                                                                                                                                        its content
                 Length 195
                                                                                                                                                                                       (By similarity)
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                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ne production,
populations
rophages. This
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                                                                                                                                                                                                                                                                                                                                                                                for
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Query Match
Best Local
                                                                                     CARBOHYD
CONFLICT
                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gloster S.E., Sandeman R.M., "Cloning of a cDNA and gene stimulating factor."; submitted (SEP-1997) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  002837; 019180;
15-JUL-1998 (Re
                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                            PRINTS; PR00433; IL6GCSFMGF. ProDom; PD008388; GCSF_MGF;
                                                                                                                                                                                                                                                                                                                                  InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; Y10494; CAA771518.1; -.
EMBL; U66482; AAB70701.1; -.
EMBL; U68481; AAB70700.1; -.
EMBL; U68481; AB70700.1; -.
HSSP; P09919; 1RHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAY-2000 (Rel. 39, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Granulocyte colony-stimulating factor precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CSF3
                                                              SEQUENCE
                                                                                                                                                                                                                                                             SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sus scrofa (Pig).
                                                                                                                                                                                                                Cytokine;
                                                                                                                                                                                                                                  PROSITE;
                                                                                                                                                                                                                                                                                                                       Pfam; PF00489; IL6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (JAN-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kulmburg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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SUBCELLULAR LOCATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    European Bioinformatics Institute.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   non-profit institute. There are no rest and this statement is not removed. Usage by an requires a license are not removed.
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702; DB 1;
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                      Length 195;
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interPro;

IPR009079;

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Csf3

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RESULT 9
CSF3_MOUSE
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                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is provent the EMBL output the Swiss Institute of Bioinformatics and the EMBL output the Swiss Institute. There are no restrictions in the same of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      עס-טער (Rel. 44, Last annotation update) (Granulocyte colony-stimulating factor precursor (G-CSF). אמשפרספלי לייניים (G-CSF) אמשפרספלי לייניים איניים איניים לייניים איניים איניים לייניים איניים אי
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P09920;
                                                                                                                                                                                                                                                                                                                               the European Bioinformatics Institute. There are no rest
use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by an
entities requires a license agreement (See http://www.isb-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -!- SUBCELLULAR LOCATION: Secreted.
-!- PTM: O-glycosylated (By similarity).
-!- SIMILARITY: Belongs to the IL-6 superfamily.
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Mus musculus (Mouse).
PIR; A29536; A26496.
HSSP; P09919; 1RHG.
MGD; MGI:1339751; Cs
                                                                                                                                                EMBL; M13926; AAA37672.1; EMBL; X05402; CAA28986.1;
                                                                                                                                                                                                                                                                                      or send an email to license@isb-sib.ch)
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MEDLINE=87190474; PubMed=3494605;
MEDLINE=87190474; PubMed=3494605;
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Tsuchiya M., Asano S., Kaziro Y.,
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"Structural studies
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SUBUNIT: Monomer.
SUBCELLULAR LOCATION: Sec.
PTM: O-glycosvlatea 'co.
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he murine granulocyte
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Query Match
Best Local Similarity
Matches 127; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 129; Conser
                                              PRINTS; PRO0433; ILGGCSFMGF. 1.
PRODOM; PD008388; GCSF MGF; 1.
SMART; SM00126; ILG; 1.
PROSITE; PS00254; INTERLEUKIN PROSITE; PS00254; INTERLEUKIN SEQUENCE 214 AA; 23659 MW;
                                                                                                                                                         HSSP; P09919; 1RHG.
GO; GO:00055125; F:cytokine activity; IEA.
GO; GO:0005125; F:cytokine activity; IEA.
GO; GO:0008083; F:growth factor activity;
GO; GO:0006955; P:immune response; IEA.
                                                                                                         InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
Pfam; PF00489; IL6; 1.
                                                                                                                                                                                                                     Gene 175:101-104(1996).

GMBL; U37101; AAC52915.1; -.

PIR; JC5043; JC5043.
                                                                                                                                                                                                                                                             stimulating factor.";
                                                                                                                                                                                                                                                                    Han S.W., Ramesh N., Osborne W.R.; "Cloning and expression of the cDNA encoding rat granulocyte colony-
                                                                                                                                                                                                                                                                                                                                                  Bukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                    Granulocyte colony stimulating
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DISULFID
CARBOHYD
SEQUENCE
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SIGNAL
                                                                                                                                                                                                                                                                                                   MEDLINE=97074656;
                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                    P97712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00433; IL6GCSFMGF.
PRODOM; PD008388; GCSF MGF; 1.
PRODOM; PD004356; Interleukin_6;
SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR003629;
InterPro; IPR003573;
Pfam; PF00489; IL6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NLGVAPTVQPTQSAMPAFTSAFQRRAGGVLAISYLQGFLETARLALHHLA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LPPSLPLPRSFLLKSLEQVRKIQASGSVLLEQLCATYKLCHPEELVLLGHSLGIPKASLS
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                                                                                                                                                                                                                                                                                                                                                 Eutheria;
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208
78
110
169
22421
                                               INTERLEUKIN 6; 1.
; 23659 MW; 29BB88B17B684C55 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; INTERLEUKIN_6; 1. protein sequencing;
                                                                                                                                                                                                                                                                                   PubMed=8917083; DOI=10.1016/0378-1119(96)00131-X;
                                                                                                                                                                                                                                                                                                                                                 Chordata;
Rodentia;
            70.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71.5%;
75.9%;
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IL6_MGF_GCSF.
                                                                                                                                                                                                                                                                                                                                                                                             03, Created)
03, Last sequence update)
26, Last annotation updat
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Score 634; DB
Pred. No. 5.6e
10; Mismatches
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By similarit
By similarit
O-linked (Ga
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                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; |
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                     factor.
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r similarity.
r similarity.
linked (GalNAc. . .) (By similarity).
OBF3622135C906DB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  214
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            .6e-50;
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                                                                                                                                                                          IEA.
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                       Length 214;
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                                                                                                                                                                                                                                                                                                                                                Buteleostomi;
; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      172
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Conservative

10;

35;

Indels

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Last sequence update)
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RESULT 12

MGF_CHICK STANDARD; PR

ID MGF_CHICK STANDARD; PR

AC P13B54;

DT 01-JAN-1990 (Rel. 13, Created)

DT 01-JAN-1990 (Rel. 13, Last seque

DT 28-F2B-2003 (Rel. 41, Last annot

DE Myelomonocytic growth factor pre

OS Gallus gallus (Chicken).
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Best Local S
Matches 101
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PROSITE; PS00254; INTERLEUKIN_6; 1.

SEQUENCE 127 AA; 13657 MW; 25559C2569802077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP; P35833; 1BGC.

CO; GO:0005576; C:extracellular; IEA.

GO; GO:0005125; F:cytokine activity; IEA.

GO; GO:0008083; F:growth factor activity;

GO; GO:0008955; P:immune response; IEA.

GO; GO:0006955; P:immune response; IEA.
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Submitted (APR-2002)
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ProDom; PD008388; GCSF_MGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR009079; 4 helix cytokinė.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Equus caballus (Horse)
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01-MAR-2004
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01-OCT-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8MKE0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48 VLLGHSLGIFWAPLSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQ
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                                                                                                                                                                                                                                                                                             LRYLAEP 127
                                                                                                                                                                                                                                                                                                                                                LRHLAQP 174
                                                                                                                                                                                                                                                                                                                                                                                                                            LDVADFATTIWQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Trembirel. 22, Created)
(Trembirel. 22, Last sequence update)
(Trembirel. 26; Last annotation updat colony-stimulating factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Takafuji V.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata; Craniata; Vertebrata; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57.0%;
79.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 511; DB
Pred. No. 5.9e
9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sharova L.V., Crisman M.V., EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SQLHSGLLLYQGLLQALAGISPELAPTLDMLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
5.9e-39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₿
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Howard R.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
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156 LPAEQRSPPPTFSGPFQQQVGGFFILANFQRFLETAYRALRHLAR 200

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Matches
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Best Local (
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DISULFID
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Probom; PD008388; GCSF MGF; 1.
Probom; PD004356; Interleukin_6; 1.
SMART; SM00126; IL6; 1.
PROSITE; PS00254; INTERLEUKIN_6; 1.
Glycoprotein; Growth factor; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE-92195319; PubMed-1549124;
Sterneck E., Blattner C., Graf T., Leutz
"Structure of the chicken myelomonocytic
"Structure of the promoter in av
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     [1]
SEQUENCE FROM N.A.
MEDLINE=89231616; PubMed=2785450;
Namm K., Sterneck E., F
Smart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Glycoprotein;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; M85034; AAA48694.1; -.
EMBL; X14477; CAA32639.1; -.
PIR; A42247; A42247.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no was modified and this statement is not removed. Usage by and for commercia entities requires a license agreement (See http://www.isb-sib.ch/announce or send an email to license@sisb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Leutz A., Damm K., Sterneck E., Kowenz E., Ness S., Frank R.,
Gausepohl H., Pan Y.-C.E., Smart J., Hayman M., Graf T.;
"Molecular cloning of the chicken myelomonocytic growth factor (cMGF)
reveals relationship to interleukin 6 and granulocyte colony
stimulating factor.";
                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00433; IL6GCSFMGF.
PRINTS; PR00434; INTERLEUKIN6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein kinases."
Mol. Cell. Biol. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBO J. 8:175-181(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBCELLULAR LOCATION: Secreted. SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUNCTION: Hematopoietic growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proliferation and colony formation cells of the myeloid lineage.
                       131
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P09919; 1RH
                                                                   96
                                                                                                             71
                                                                                                                                                                                                                                              67;
                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                    QSFLLKCLEQVRKIQGDGAALQBKLCATYKLCHPEELVLLGHSLGIPWAPLSSCPSQALQ 70
QPTQ--GAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQ
                                                                 AEVCFTQIRAGLHAYHDSLGAVLRLLPNHTTLVETLQLDAANLSSNIQQQMEDLGLDTVT 155
                                                                                                      LAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQMEELGMAPAL 130
                                                                                                                                                          QLFLHKNLEFTRKIRGDVAALQRAVCDTFQLCTEEELQLVQPDPHLVQAPLDQCHKRGFQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR003574;
                                                                                                                                                                                                                                                                                                                                       201 AA;
                                                                                                                                                                                                                                                                                                                                                                                 1
24
61
89
123
                                                                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                                                                                            201
67
99
123
137
                                                                                                                                                                                                                                                                 33.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Interleukin_6.
                                                                                                                                                                                                                                                                                                                                         Œ,
                                                                                                                                                                                                                                              28;
                                                                                                                                                                                                                                                                 Score 304; DB 1; Length 201; Pred. No. 9.1e-20;
                                                                                                                                                                                                                                                                                                                                                         Myelomonocytic growth factor. By similarity. By similarity. By similarity. N-linked (GlcNAc. . .) (Poten N-linked (GlcNAc. . .)
                                                                                                                                                                                                                                                                                                                                       240A8DD21B4244E6
                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kowenz E., Ness S., Frank R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Leutz A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   factor that stimulates the cion of normal and transfor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ic growth factor gene avian myelomonocytic
                                                                                                                                                                                                                                                                                                                                         CRC64;
                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                (Potential)
                                                                                                                                                                                                                                                                                                                                                                                   (Potential)
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6 outstation -
                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                          CHAIN
SEQUENCE
                                                                                                                                                                                                                              Signal
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                      Kaiser P.;
Submitted (JAN-2003) to the EMBL/GenBank/DDBJ EMBL; AJ309540; CAC40812.1; -.
EMBL; AJ309383; CAC15566.2; -.
                                                                                                                                                                                                                                                           PRINTS; PRO0433; ILGGCSFMGF.
PRINTS; PR00434; INTERLEUKING.
PRODOM; PD008388; GCSF_MGF; 1.
ProDom; PD004356; Interleukin_6; 1.
SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                                                                                                          GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005126; F:cyrckine activity; IEA.
GO; GO:0005138; F:interleukin-6 receptor!
GO; GO:0006955; P:immune response; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. Schneider K., Klaas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-DEC-2001
01-DEC-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Salmonella
                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Differential cytokine invasion by Salmonella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wigley P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (FEB-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             090YI0;
                                                                                                                                                                                                                                                    PROSITE
                                                                                                                                                                                                                                                                                                                                                                                                                                           Microbiology 146:3217-3226(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kaiser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Archosauria; Aves; Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Interleukin-6 precursor.
                                                                                                                                                                           Local
                    153
                                        157
                                                                                 101 NSMEMLVRNNLNLP----KVTEEDGCLLAGFDEEKCLTKLSSGLFAFQTYLEFIQETFDS
                                                                                                                                                                                                                                                                                                                  PF00489;
                                                            99
                                                                                                     44
                                                                                                                         41
                                                                                                                                                                  46;
                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                       FROM N.A.
                                                                                                                         LPPAAAVPLPAAADSSGEVGLEEEAGARRALLDCEPLARVLRDRAVQLQDEMCKKFTVCE
                                                                                                                                            LGPASSLP-----OSFLLKCLEQVRKIQGDGAALQEKLCATYKLCH
IEKITMHLILRDFTSFMEKTVRAVRYL
                   ---VASHL-----QSFLEVSYRVLRHL
                                       EKONVESICYSTKHLAATIROMV-----INPDEVVIP--DSAAOKSILANIKSDKDW
                                                             LGPTLDTLQLDVADFATTIWQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVL-----
                                                                                                    PESTVILIGHSLGIPWAPLSSCPSQALQLAG-----CLSQLHSGLFLYQGLLQALEGISPS
                                                                                                                                                                                                          48
241 j
                                                                                                                                                                                                                                                                                                                                                                                                                                                    gallinarum."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rothwell
                                                                                                                                                                 Conservative
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                                                                                                                                                                                                           AA;
                                                                                                                                                                                                                                                                                                                 IL6; 1.
                                                                                                                                                                                                                                                  INTERLEUKIN_6; 1.
                                                                                                                                                                                                           241 r
26790 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ) R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
                                                                                                                                                                                                                               47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
                                                                                                                                                                          12.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              typhimurium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          expression in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19,
19,
27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Galyov E.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kaspers B., Staeheli
the EMBL/GenBank/DDBJ
                                                                                                                                                                  35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                Score 111; DB 2
Pred. No. 0.053;
5; Mismatches
                                                                                                                                                                                                                   Potential.
mature ChIL-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata, Vertebrata; Euteleostomi;
; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                            657F8049F25BD2F8 CRC64;
                                                                                                                                                                                                                                                                                                                           receptor binding; se; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          avian cells in
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RESULT 15
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Best Local S
Matches 37
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Mammalla; Eutheria; Cetartiodactyla;
Monodontidae; Delphinapterus.
                                                                                                                                                                                                                                         Interleukin 6.
Delphinapterus leucas (Beluga whale).
Delphinapterus leucas (Beluga whale).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Cherartiodactyla; Cetacea; Odontoceti;
                  Vet. Immunol. Immunopathol. 
EMBL; AF076643; AAD42929.1; 
HSSP; P05231; 1ALU.
                                                               St-Laurent G., Archambault D.;
"Molecular cloning, phylogenetic analysis and expression whale (Delphinapterus leucas) interleukin 6.";
Vet. Immunol. Immunopathol. 73:31-44(2000).
                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE=20141864; PubMed=10678396; DOI=10.1016/S0165-2427(99)00150-6;
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Submitted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProDom; PD004356; Interleukin_6; 1.
SMART; SM00126; IL6; 1.
PROSITE; PS00254; INTERLEUKIN_6; 1.
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01-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00433; IL6GCSFMGF.
PRINTS; PR00434; INTERLEUKIN6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9823;
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GO:0005125; F:cytokine activity; IEA.
GO:0005128; F:interleukin-6 receptor binding; IEA.
GO:0005128; F:immune response; IEA.
    GO:0005576;
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(JUN-2002)
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IPR003573; IL6_MGF_GCSF.
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C:extracellular; IEA
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; 23881 MW; 1F54
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to the EMBL/GenBank/DDBJ databases.
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Matches 33; Conserv
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SEQUENCE 208 AA; 23456 MW; 81CC85C6E80389C4 CRC64;
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SMART; SM00126; IL6; 1.
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InterPro; IPR003574; Interleukin_6
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                                                    TĞLLEYQIYLDYLQNEYEGDKGSIEAVQISIKALAQILRQKVKNPDEVTTPDPTTNASLM 171
                                                                                                        IKYILGKISAMRKEMCEKYDKCENSKEALAENNLNLPKMAEKDGCFQSGFNQETCLMRIT
                                                                                                                                 VRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIP-WAPLSSCPSQALQLAGCLSQLH
NNLQSQNDDWMRNTKILLILRSLENFLQFSLRAVR
                      --MPAFASAFQRRAGGVLVASHLQSFLEVSYRVLR 169
                                                                             SGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQMEELGMAPALQPTQGA---
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                                                                                                                                                                                                                                                                                                                                                     response;
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                                                                                                                                                                                                                                                                                                                                                       vity; IEA.
receptor binding; IEA.
se; IEA.
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Search completed: July 9, 2005, 12:39:02 Job time : 110.682 secs

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Result
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Maximum DB
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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                                                                                                                                110.5
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1: uniprot_sprot:*
2: uniprot_trembl:*
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Gapop 10.0 , Gapext 0.5
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Q9KTL6
Q9NPF7
Q6NZ80
Q8MXE5
HMCU DROME
Q9A523
Q91019
Q8RJY3
Q9POS7
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CSF3_FELCA
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CSF3_CANFA
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CSF3_BOVIN
CSF3_PIG
CSF3_MOUSE
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Q8D706
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IL6_ORCOR
IL6_HORSE
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MGF_CHICK
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Q9XT80
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                                                                                                                                                                                                                                                    Q8n4w3 homo sapien
P09919 homo sapien
O02708 felis silve
Q9gjuO felis silve
P35834 canis famil
Q28746 ovis aries
                   Q9a523
Q9i019
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Q8mke5
P10180
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Q9kt16
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Q90y10
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                                      3 bos taurus
7 sus scrofa
0 mus musculu
2 rattus norv
6 equus cabal
4 gallus gall
5 sus scrofa
6 delphinapte
3 sus scrofa
7 orcinus orc
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2 homo sapien
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5 felis silve
6 vibrio chol
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Matches 174; Conser
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MEDLINE=86151684;
Souza L.M., Boone
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MEDLINE-86118679; PubMed-3484805;

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Hirata Y., Kubota N., Oheda M., N
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Mammalia; Eutheria;
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PRODOM; PD008388; GCSF MGF; 1.
PRODOM; PD004356; Interleukin 6;
SMART; SM00126; IL6; 1.
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Devlin J.J., Devlin
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Oheda M., Nomura H., Yamazaki T.;
"The chromosomal gene structure and
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Name=CSF3;
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colony-stimulating factor precursor (G-CSF)
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  PubMed=2420009;
T.C., Gabrilove
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in P.E., Myambo
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Nomura H., Ono M
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EMBL; EMBL;

X03438; M13008; X03656; X03655;

CAA27168.1; AAA03056.1; CAA27291.1; CAA277290.1;

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http://www.isb-sib.ch/announce/

EMBL

a collaboration - MBL outstation

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MEDLINE=93281718; PubMed=7685117;
Hill C.P., Osslund T.D., Elsenberg D.;
"The structure of granulocyte-colony-stimulating
relationship to other growth factors.";
Proc. Natl. Acad. Sci. U.S.A. 90:5167-5171(1993).
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factor determined by NMR spectroscopy. I
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normal and leukemic myeloid cells.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: Granulocyte/macrophage colony-stimulating facytokines that act in hematopoiesis by controlling the differentiation, and function of 2 related white cell of the blood, the granulocytes and the monocytes-macrocytes-induces granulocytes.
                                                                                                                                                                                                       SIMILARITY: Belongs to the IL-6 superfamily. CAUTION: Ref. 4 misquotes the gene name as "CSF1". DATABASE: NAME=Neupogen/Granulokine; NOTE=Clinical information on Neupogen/Granulokine;
                                                                                                                                                                                                                                                                PTM: O-glycan consists of Gal-GalNAc disaccharide which can be modified with up to two sialic acid residues (done in recombinantly expressed G-CSF from CHO cells). PHARMACEUTICAL: Available under the names Neupogen or Granulokine (Amgen/Roche) and Granocyte (Rhone-Poulenc). Used to treat neutropenia (a disorder characterized by an extremely low number of the neutrophils in blood).
                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBCELLULAR LOCATION: Secreted ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBUNIT: Monomer.
                                                                                                                                                                                         WWW="http://www.neupogen.com/".
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Hu S., Boone T.C.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 141;
                                                                                                                                                                 01-JUN-1994 (Rel. 29, Created)
01-JUN-1994 (Rel. 29, Last sequence up
25-OCT-2004 (Rel. 45, Last annotation
Granulocyte colony-stimulating factor
Name=CSF3;
                                                                                                                                                                                                                                        CSF3 CANFA
P35834;
01-JUN-1994
01-JUN-1994
                                                                                                                                                                                                                                                                                                                        CANFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
InterPro; IPR003574; Interleukin_6.
Pfan; PF00489; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Signal.
SIGNAL
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Molecular cloning and expression of the granulocyte colony-stimulating factor."; EMBL: ARMADETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9GJU0;
01-MAR-2001
01-MAR-2001
                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9615;
                                                                                                                             Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Felis silvėstris catus (Cat).
Eukaryota; Metazoa; Chordata; (
Mammalia; Eutheria; Carnivora;
X-RAY CRYSTALLOGRAPHY (2.2 ANGSTROMS).
MEDLINE=94076341; PubMed=7504736;
Lovejoy B., Cascio D., Eisenberg D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProDom; PD008388
SMART; SM00126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PRO0433; IL6GCSFMGF.
PRINTS; PRO0434; INTERLEUKIN6.
PRODOM; PD008388; GCSF_MGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005125; F:cytokine activity; IEA.
GO; GO:0005138; F:interleukin-6 receptor binding; IEA.
GO; GO:000655; P:immune response; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Granulocyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00254; INTERLEUKIN_6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WEDLINB=21531548; PubMed=11675019; Yamamoto A., Iwata A., Tuchiya K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=G-CSF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUL-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                   142
                                                                                                                                                                                                                                                                                                                                                                                                                                                            122
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEELGMAPALQFTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSSCSSQALQLTGCLRQLHSGLFLYQGLLQALAGISPELAPTLDMLQLDITDFAINIWQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TPLGPASSLPOSFLLKCLEOVRKIOGDGAALOEKLCATYKLCHPEELVLLGHSLGIPWAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TPLGPTSSLPQSFLLKCLEQVRKVQADGTALQERLCAAHKLCHPEELVLLGHALGIPQAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       195 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TremBLrel. 16, Created)
(TremBLrel. 16, Last sequence update)
(TremBLrel. 27, Last annotation update)
colony-stimulating factor precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1L6;
                                                                                                           Carnivora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22 E
21255 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82.6%;
81.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11;
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Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Potential.
; 544C682909412FCF CRC64;
                                                                                                        Craniata; Ve: ; Fissipedia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; ; Fissipedia; Felidae;
                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of the cDNA encoding
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Katsumata A., Oishi K., Saito T.,
                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                          175
                                                                                                                                                                                               update)
(G-CSF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                        Vertebrata;
ia; Canidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .4e-60;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                             Euteleostomi;
Canis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi;
Felis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           feline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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RESULT 6
CSF3 SEF3
ID CSF3
ID CSF3
AC Q287
DT 30-M
DT 30-M
DT 30-M
DT 05-J
Gran
DE Gran
GN Name
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                                                                                                                                                                                                                                             Matches 141;
                                                                                                                                                                                                                                                      Query Match
Best Local
Eukaryota; Metazoa; (
Mammalia; Eutheria; C
Caprinae; Ovis.
NCBI TaxID=9940;
                                                                   SHEEP
CSF3_SHEEP
Q28746;
Q28746;
30-MAY-2000
                                       JO-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Granulocyte colony-stimulating factor (G-CS)
Name=CSF3;
                                                                                                                                                                                                                                                                                       TURN
HELIX
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STRAND
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DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PRO0433; ILGGCSFMGF.
PRODDISSB8; GCSF MGF; 1.
SMART; SM00126; ILG; 1.
PROSITE; PS00254; INTERLEUKIN_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -|- SIMILARITY: Belongs to the PDB; 1BGD; X-ray; @=1-175. PDB; 1BGB; X-ray; A/B=1-175.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GGSF_MGF.
InterPro; IPR003573; IL6_MGF_GCSF.
Pfam; PF00489; IL6; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Crystal structure
                                                                                                                                                                                                                                                                                                                                                                                                                                        D-structure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBUNIT: Monomer.
SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CSF induces granulocytes.
                                                                                                                                        121
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                                                                                                                                                                                                                            Similarity
                                                                                                                                       QMEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQP
                                                                                                                                                                                 PLSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGFTLDTLQLDVADFATTIWQ
                                                                                                                                                                                                          WILDLESSTEDSETTKCTEOAKKIÖGDGVATÖEKTCALAKTCHEEETATTGHSTGIEMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0-glycosylated
                                                                                                                                                                          PLSSCSSQALQLMGCLRQLHSGLFLYQGLLQALAGISPELAPTLDTLQLDTTDFAINIWQ
                                                                                                                                                                                                                                                                                175 AA;
                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                10
12
45
63
67
72
93
101
1126
172
                                                                                                                                                                                                                                                                                                                                                                                                                                Cytokine; Glycoprotein;
                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                INTERLEUKIN_6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of canine and bovine
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39
55
56
69
92
125
1725
1726
                  Chordata; Craniat Cetartiodactyla;
                                                                                                                                                                                                                                                                                18858 MW;
                                                                                                                                                                                                                                                      82.0%;
                                                                                                                                                                                                                                             Score 739; DB
Pred. No. 1.4e
11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                               0-linked
                           Craniata; Vertebrata; Euteleostomi;
                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1L-6
                                                                                                                                                                                                                                                                                28C26B24990C6DB3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     superfamily.
                   Ruminantia;
                                                                                              174
                                                  (G-CSF)
                                                                                                                                                                                                                                                                                                                                                                                                               (GalNAc.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                        factor.
                                                                                                                                                                                                                                                               Length 175;
                   Pecora;
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                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                               (By similarity).
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RESULT
CSF3_BC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                   CSF3 BOVIN STANDARD; PRT; 195 AA. P35833; Q9TV89; 01-UN-1994 (Rel. 29, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 25-OCT-2004 (Rel. 45, Last annotation update) Granulocyte colony-stimulating factor precursor Name=CSF3; Synonyms=GCSF; Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                           BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD.
SEQUENCE
                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
Bovinae; Bog.
NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00254; INTERLEUKIN 6; 1. Cytokine; Glycoprotein; Growth factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS0025;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00489; IL6; 1.
PRINTS; PR00433; IL6GCSFMGF.
ProDom; PD008388; GCSF_MGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entities requires a license agreement (S or send an email to license@isb-sib.ch).
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O'Brien P.M., Seow H.F., Rothel J.S.
"Cloning and sequencing of an ovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; L07939; AAA68006.1; PIR; T10268; T10268.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSSP; P09919; 1RHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Cloning and sequencing of an factor cDNA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR009079; 4 helix cytokine interPro; IPR003629; GCSF MGF. INTERPRO; IPR003573; IL6 MGF GCSF.
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PTM: O-glycosylated (By similarity). SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seq. 4:339-342(1994).
FUNCTION: Granulocyte/macrophage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUBUNIT: Monomer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      differentiation, and function of
of the blood, the granulocytes an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SWISS-PROT entry is copyright. It is produced through a collabeen the Swiss Institute of Bioinformatics and the EMBL outst Buropean Bioinformatics Institute. There are no restrictions European Bioinformatics as long as its content is for the content of the cont
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133
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t act in hematopoiesis by controlling the product
on, and function of 2 related white cell populati
the granulocytes and the monocytes-macrophages.
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74
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By similarity.
O-linked (GalNAc.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ± 738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      granulocyte
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
.7e-59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21;
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                                                                                                                                                                                        (G-CSF)
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LSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQ 121

TPLGPARSLPQSFLLKCLEQVRKIQGDOAALQBKLCATYKLCHPEELVLLGHSLGIPQAP

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Query Match
Best Local S
Matches 141
                                    HELIX
HELIX
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      factor (G-CSF). To J. Mol. Biol. 23
                                                                                                                                                                       CHAIN
DISULFID
DISULFID
CARBOHYD
CONFLICT
                                                                          HELIX
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                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  submitted (SEP-1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=Holstein;
Heidari M., Kehrli M.E.
"Cloning, sequencing, a
                                                                                                                                                                                                                                                          PRINTS; PRO0433; IL6GCSFMGF.
ProDom; PD008388; GCSF_MGF; 1.
                                                                                                                                                                                                                                                                                                                              EMBL; AF092533; AAD16102.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lovejoy B., Cascio D., Eisenberg D.; "Crystal structure of canine and bovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                         PROSITE; PS00254;
                                                                                                                                                                                                                                                    SMART;
                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                         -!- SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=94076341; PubMed=7504736;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               X-RAY CRYSTALLOGRAPHY (1.7 ANGSTROMS).
                                                                                                                                                                                                                                 D-structure;
                                                                                                                                                                                                                                                                                        InterPro; IPR003573; IL6_MGF_GCSF.
                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUNCTION: Granulocyte/macrophage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cytokines that act
                                                                                                                                                                                                                                                                                                                      1BGC;
141;
                                                                                                                                                                                                                                                                                PF00489; IL6; 1
                                                                                                                                                                                                                                                   SM00126; IL6;
        Similarity
                                                                                                                                                                                                                                                                                                IPR009079; 4 helix cytokine.
IPR003629; GCSF MGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequencing, and analysis of cDNA encoding bovine imulating factor.";
                                      195
Conservative
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93
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                                                                                                                                                                                                                              Cytokine;
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A
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                                                                                                                                                                                                                                         INTERLEUKIN_6; 1
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112
113
                                     192
21431 MW;
      80.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                Glycoprotein;
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11;
Score 727; DB
Pred. No. 1.9e
11; Mismatches
                                                                                                                                                                        O-linked
TS -> RG
                                                                                                                                                                                                            Granulocyte colony-stimulating factor.
                                                                                                                                                                                                                       Potential
                                     8C06119E4ADFBA73 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            colony-stimulating this by controlling to
                                                                                                                                                                        (GalNAc. . . (in Ref. 2).
                                                                                                                                                                                                                                Growth factor;
                                                                                                                                                                                                                                                                                                                                                          Oved. Usage by and to (See http://www.isb-sib
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  related
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  granulocyte-colony
        DB 1;
.9e-58;
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                Length
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Indels
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15-JUL-1998 (Rel. 36, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
                                                              DISULFID
DISULFID
CARBOHYD
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; U68482;
EMBL; U68481;
HSSP; P09919;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gloster S.E., Sandeman R.M., "Cloning of a cDNA and gene stimulating factor.", Submitted (SEP-1997) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Granulocyte colony-stimulating Name=CSF3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CSF3
                                                                                                                                                                                                                                                           SMART; SM00126; IL6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; Y10494;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or send an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  modified
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Submitted (JAN-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sus scrofa (Pig).
                                                                                                                                                                        CHAIN
                                                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                   Cytokine;
                                                                                                                                                                                                                                     PROSITE;
                                                                                                                                                                                                                                                                             ProDom;
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                                                                                                                                                                                                                                                                                                                          InterPro; IPR003573
Pfam; PF00489; IL6;
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                                                                                                                                                                                                                                                                                                                                                                     [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                         interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   European Bioinformatics Institute. There are no rest
by non-profit institutions as long as its content
ified and this statement is not removed. Usage by an
ities requires a license agreement (See http://www.isb-
send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopolesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. This CSF induces granulocytes (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PTM: O-glycosylated (By similarity). SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUBUNIT: Monomer.
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                                                                                                                                                                                                                                                                         PD008388; GCSF_MGF; 1.
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                                                                                                                                                                                                                                                                                                                                          IPR009079; 4 helix cytokine.
IPR003629; GCSF MGF.
IPR003573; IL6_MGF_GCSF.
                                                                                                                                                                                                                   Glycoprotein;
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123
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AAB70701.1; -.
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                                                                                                                                                                                                              INTERLEUKIN_6; 1.
otein; Growth factor; Signal.
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95
                                                              21214
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Cetartiodactyla; Suina; Suidae;
77.9%;
79.2%;
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                                                                       Potential.

Granulocyte colony-stimulating fagranulocyte colony-stimulating fagranulatity.

By similarity.

O-linked (GalNAc. . .) (By similarity.

A -> R (in Ref. 1).
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  Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                 84787F20DB0AEA1C
702;
No. 3
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  2; DB 1;
. 3.8e-56;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   granulocyte-colony
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          databases
                      Length 195
                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (G-CSF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                           similarity)
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                                                                                                                                                                          factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .ch/announce/
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RESULT 9
CCF3 MOUSE
ID CSF3 M
AC P09920
DT 01-MAR
OC MAMMANIA
RT TSUCHI
RT TSUCHI
RT FACTO
RN [2]
RN EDUIN
RA TSUCHI
RT SECUEN
RT FACTO
CC -1- SI

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUL-2004 (Rel. 44, Last annotation update)
Granulocyte colony-stimulating factor precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Name=Csf3; Synonyms=Csfg;
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-MAR-1989 (Rel. 10, Last sequence up 05-JUL-2004 (Rel. 44, Last annotation
                                                                                                EMBL; M13926;
EMBL; X05402;
                                                                                                                                                                     or send an email to license@isb-sib.
                                                                                                                                                                                                                    modified
                                                                                                                                                                                                                                                                                            between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed=3501294;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eur. J. Biochem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  stimulating factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tsuchiya M., Kaziro Y., Nagata S
"The chromosomal gene structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.G. PubMed=3494605; MEDLINE=87190474; PubMed=3494605; Nagata S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   colony-stimulating factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=87017003; PubMed=3489940;
Tsuchiya M., Asano S., Kaziro Y., Nagata S.;
"Isolation and characterization of the cDNA for murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAR-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P09920;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Simpson R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Structural
                                                                                                                                                                                                             European Bioinformatics Institute. The by non-profit institutions as long ified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                            SUBCELLULAR LOCATION: Secreted. PTM: O-glycosylated (By similarity). SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBUNIT: Monomer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FUNCTION: Granulocyte/macrophage colony-stimulating factors at cytokines that act in hematopolesis by controlling the product differentiation, and function of 2 related white cell population the blood, the granulocytes and the monocytes-macrophages.
                                                                                                                                                                                                                                                                                       SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOUSE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chem. Hoppe-Seyler 368:1327-1331(1987).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIFWAPL
                                                                                                                                                                                              requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDLRMAPASLPTOGTVPTFTSAFORRAGGVLVVSQLQSFLELAYRVLRYLAEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EELGMAPALQPTQGAMPAPASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SSCSSQALQLTGCLNQLHGGLVLYQGLLQALAGISPELAPALDILQLDVTDLATNIWLQM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           studies
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                                                                                                AAA37672.1;
CAA28986.1;
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on the murine gra
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                                                                                                                                                                                              . Usage by and fo http://www.isb-sib.
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5 outstation -
                                                                                                                                                                                              .ch/announce/
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PIR; A29536; A26496. HSSP; P09919; 1RHG.

InterPro;

MGI:1339751; Csf3. rPro; IPR009079; 4_helix_cytokine.

1RHG. Csf3.

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RESULT 10
P97712
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Query Match
Best Local Similarity 72.0
Matches 127; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 129;
                                                                                                          HSSP; P09919; IRHG.

GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005125; F:cytokine activity; IEA.
GO; GO:0005125; F:cytokine activity
GO; GO:0008083; F:growth factor activity
GO; GO:0006955; P:immune response; IEA.
InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
Pfam; PF00489; IL6; 1.
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SIGNAL
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DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                              P97712;
01-MAY-1997 (TrEMBLrel.
01-MAY-1997 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
                                                                                PRINTS; PR00433; IL6GCSFMGF.
ProDom; PD008388; GCSF_MGF; 1.
                                                                                                                                                                                                                                                                    MEDLINE=97074656; PubMed=891708
Han S.W., Ramesh N., Osborne W.
"Cloning and expression of the
                                                                                                                                                                                                                                  Gene 175:101-104(1996).
EMBL; U37101; AAC52915.1; -.
                                                                                                                                                                                                                                                           etimula
                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                       Granulocyte colony stimulating factor. Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                P97712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00433; ILGGCSFMGF.
PRODOM; PD003388; GCSF MGF; 1.
PRODOM; PD004356; Interleukin_6;
SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cytokine; Direct protein sequencing; Glycoprotein; Growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00254;
                                                                                                                                                         GO:0005576; C:extracellular; IEA.
GO:0005125; F:cytokine activity; IEA.
GO:0008033; F:growth factor activity;
GO:0006955; P:immune response; IEA.
                                     ; PD00b300;
SM00126; IL6; 1.
SM00126; INTERLEUKIN_6;
PS00254; INTERLEUKIN_6;
23659 MW; 2
                                                                                                                                                                                                          JC5043; JC5043.
P09919; 1RHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pro; IPR003629; GCSF MGF.
Pro; IPR003573; IL6_MGF_GCSF.
PF00489; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96
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                                                                                                                                                                                                                                                           ting factor."
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                                                                                                                                                                                                                                                                                  PubMed=8917083; DOI=10.1016/0378-1119(96)00131-X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INTERLEUKIN_6; 1.
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169
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           70.5%;
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74.6%;
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03, Last sequence update)
26, Last annotation update)
  12;
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Score 635; DB
Pred. No. 5.6e.
2; Mismatches
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Pred.
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By similarity.
O-linked (GalNAc. . . ) (By simi
                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata;
Sciurognathi; Muridae;
                                            ; 1.
29BB88B17B684C55
                                                                                                                                                                                                                                                                    cDNA encoding
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No. 1.2e-50;
           DB 2;
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                       Length 214;
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  Indels
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; Murinae; Rattus.
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RESULT 12
MGF CHICK
ID MGF CHICK
AC P13854;
DT 01-JAN-1990 (Re
TT 01-JAN-1990 (Re
T 28-FEB-2003 (Re1
T Myelomonocytic ge
Gallus gallus /**
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Q8MKE0
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Best Local
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01-OCT-2002
01-OCT-2002
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                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00489; IL6; 1.
PRINTS; PR00433; IL6GCSEMGF.
PRODOm; PD008388; GCSF_MGF;
SMART; SM00126; IL6; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005125; F:cytokine activity; IEA.
GO; GO:0008083; F:growth factor activity;
GO; GO:0008955; P:immune response; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR009079; 4 helix cytok
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
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Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9796;
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                                                                                                                                                     LRYLAEP
                                                                                                                                                                              LRHLAQP 175
                                                                                                                                                                                                                             LDVADFATTIWQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRV 168
                                                                                                                                                                                                                                                      MILGHSLGIPQPLLSSCSSQALQLTGCLSQLHSGLLLYQGLLQALAGISPELAPTLDMLQ
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79.5%;
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Perissodactyla; Equidae; Equus.
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Last annotation updat
ng factor.
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Pred. No. 7e-39;
9; Mismatches
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Rel. 13, Created)
Rel. 13, Last sequence update)
Rel. 41, Last annotation updat
Rel. 41 factor precursor (MGF
(Chicken).

n update) or (MGF)

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Matches
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Best Local Similarity
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DISULFID
CARBOHYD
CARBOHYD
SEQUENCE
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PRINTS; PR00434; INTERLEUKIN6.
PRODOm; PD008388; GCSF MGF; 1.
ProDom; PD004356; Interleukin_6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content use by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sterneck E., Blattner C., Graf T., Leutz A.; Sterneck E., Blattner C., Graf T., Leutz A.; "Structure of the chicken myelomonocytic grownecific activation of its promoter in avian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Leutz A., Damm K., Sterneck E., Kowenz E., Ness S., Frank R., Gausepohl H., Pan Y.-C.E., Smart J., Hayman M., Graf T.; "Molecular cloning of the chicken myelomonocytic growth factor reveals relationship to interleukin 6 and granulocyte colony stimulating factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SM00126; IL6; PROSITE; PS00254; IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; M85034; AAA48694.1; EMBL; X14477; CAA32639.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entities requires a license agreement (some send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Archosauria; Aves; Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                       CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR003574
Pfam; PF00489; IL6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein kinases.";
Mol. Cell. Biol. 12:1728-1735(1992).
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MEDLINE=92195319; PubMed=1549124;
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Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=89231616; PubMed=2785450;
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SUBCELLULAR LOCATION: Secreted
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132 OPTQ--GAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQ 174
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                                                            96 AEVCFTQIRAGLHAYHDSLGAVLRLLPNHTTLVETLQLDAANLSSNIQQQMEDLGLDTVT
                                                                                                   72
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                                                                                                   LAGCLSQLHSGLFLYQGLLQALEGISPELGFTLDTLQLDVADFATTIWQQMEELGMAPAL 131
                                                                                                                                         QLFLHKNLEFTRKIRGDVAALQRAVCDTFQLCTEEELQLVQPDPHLVQAPLDQCHKRGFQ
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IPR003629; GCSF_MGF.
IPR003573; IL6_MGF_GCSF.
IPR003574; Interleukin_6.
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123
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By similarity.
By similarity.
N-linked (GlcNAc. . .) (
N-linked (GlcNAc. . .)
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Pred. No. 1e-19;
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SEQUENCE
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PRINTS; PR00434; INTERLEUKIN6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO; GO:0005576; C:extracellular; GO; GO:0005125; F:cytokine activ GO; GO:0005138; F:interleukin-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases EMBL; AJ309540; CAC40812.1; -. EMBL; AJ250838; CAC15566.2; -.
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Microbiology 146:3217-3226(2000)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rallus gallus (Chicken).
Gallus gallus (Chicken).
Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-JUL-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProDom; PD008388; GCSF_MGF; 1.
ProDom; PD004356; Interleukin_6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wigley P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kaiser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Interleukin-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ISSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             invasion by
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO:0006955; P:immune
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                                                                                                                                                                    101
207 IEKITMHLILRDFTSFMEKTVRAVRYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         156 LPAEQRSPPPTFSGPFQQQVGGFFILANFQRFLETAYRALRHLAR
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                                     ---VASHL-----QSFLEVSYRVLRHL
                                                                                                                        LGPTLDTLQLDVADFATTIWQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVL-----
                                                                                                                                                                    NSMEMLVRNNLNLP----KVTBEDGCLLAGFDEEKCLTKLSSGLFAFQTYLEFIQETFDS
                                                                                                                                                                                                            PEELVILGHSLGIPWAPLSSCPSQALQLAG----CLSQLHSGLFLYQGLLQALEGISPB
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                                                                                EKONVESICYSTKHLAATIROMV-----INPDEVVIP--DSAAOKSILANIKSDKOW
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F:interleukin-6 receptor binding;
P:immune response; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                           47 P
241 m
26790 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INTERLEUKIN_6; 1.
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27,
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Last
                                                                                                                                                                                                                                                                                                                                    Score 111; DB 2; -
Pred. No. 0.055;
Pred. No. 74;
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; Galliformes; Phasianidae; Phasianinae;
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                                                                                                                                                                                                                                                                                                                                                                                                                           657F8049F25BD2F8 CRC64;
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annotation update)
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Salmonella enteritidis and
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233
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Q8MJ75
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Q9XT80
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Best Local S
Matches 37
                                                                     SEQUENCE FROM N.A.

MEDLINE=20141864; PubMed=10678396; DOI=10.1016/S0165-2427(99)00150-6;

St-Laurent G., Archambault D.;

St-Laurent G., Archambault considered and expression of beluga "Molecular cloning, phylogenetic analysis and expression of beluga whale (Delphinapterus leucas) interleukin 6.";

whale (Delphinapterus leucas) interleukin 6.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9XT80;
HSSP;
GO; G
                                           Vet. Immunol. Immunopathol. EMBL; AF076643; AAD42929.1;
                                                                                                                                                                                                                                                             Delphinapterus leucas (Beluga whale).
Bukaryota; Metazoa; Ctordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Cetartiodactyla; Cetacea; Odontoceti;
Monodortidae; Delphinapterus.
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01-MAR-2004
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PRINTS; PR00434; INTERLEUKIN6.
PRODOm; PD004356; Interleukin_6; 1.
SMART; SM00126; IL6; 1.
PROSITE; PS00254; INTERLEUKIN_6; 1.
SEQUENCE 212 AA; 23881 MW; 1F54
                                                                                                                                                                                                                                         NCBI_TaxID=9749;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR009079; 4 helix_cytokine.
InterPro; IPR003573; II6_MGF_GCSF.
InterPro; IPR003574; Interleukin_6.
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Lee D., Yoo H., Choi I.;

Submitted (JUN-2002) to the EMBL/GenBank/DDBJ
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Mammalia; Eutheria; Cetartiodactyla; Suina;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-OCT-2002
01-OCT-2002
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                                                                                                                                                                                                                                                                                                                                                                   nterleukin 6.
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P; P05231; 1;
GO:0005576;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GO:0005125; F:cytokine activity; IEA.
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37; Conserv
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C:extracellular;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12.3%; Score 110.5;
23.3%; Pred. No. 0.(
23.3%; Mismatches
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Last annotation update)
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IEA.
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Sus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
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                                                                                                                                                                                                                    Query Match
Best Local (
                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                        GO; GO:0000
GO; GO:0000
GO; GO:0000
InterPro;
                                                                                                                                                                                                                               ProDom; PD004356; In
SMART; SM00126; IL6;
PROSITE; PS00254; IN
                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                        PRINTS; PR00433; IL6GCSFMGF.
PRINTS; PR00434; INTERLEUKIN6.
                                                                                                                                                                                                                                                                                                                InterPro; IPR003574;
                                                                                                                                                                                                                                                                                                                           InterPro; IPR009079; 4_helix_cytokine.
InterPro; IPR003573; IL6_MGF_GCSF.
                                                                                                                                                                                                                                                                                                                                                       GO:0005125; F:cytokine activity; IEA.
GO:0005138; F:interleukin-6 receptor binding; IEA.
GO:0006955; P:immune response; IEA.
 172
                          138
                                                     112
                                                                               81
                                                                                                          52
                                                                                                                                  22 VRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIP-WAPLSSCPSQALQLAGCLSQLH
                                                                                                                                                              33;
                                                                                                                                                                            Similarity
NNLOSONDDWMRNTKIILILRSLENFLOFSLRAVR
                         --MPAFASAFQRRAGGVLVASHLQSFLEVSYRVLR 170
                                                                               SGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQMEELGMAPALQPTQGA---
                                                  TGLLEYQIYLDYLQNEYEGDKGSIEAVQISIKALAQILRQKVKNPDEVTTPDPTTNASLM
                                                                                                          IKY ILGKI SAMRKEMCEKY DKĆENSKEALAENNINI PKMAEKDGĆFOSGFNOETĆIMRIT
                                                                                                                                                                                                                    208 AA;
                                                                                                                                                               Conservative
                                                                                                                                                                                                                  INTERLEUKIN_6; 1.
; 23456 MW; 81CC85C6E80389C4 CRC64;
                                                                                                                                                                                                                                                          Interleukin_6; 1.
                                                                                                                                                                           12.0%;
                                                                                                                                                                                                                                                                                                             Interleukin_6.
                                                                                                                                                               35;
                                                                                                                                                                            Pred. No.
                                                                                                                                                                            Score 108; DB 2;
Pred. No. 0.088;
                                                                                                                                                               Mismatches
                                                                                                                                                               81;
                                                                                                                                                                                       Length 208
                                                                                                                                                               Indels
                                                                                                                                                              6
                                                                                                                                                               Gaps
                                                       171
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Search completed: July 9, 2005, 12:39:03 Job time : 112.318 secs